

PATENT

Attorney Docket No. ATT/2000-0219

**REMARKS**

In view of the following discussion, the Applicants submit that none of the claims now pending in the application are made obvious under the provisions of 35 U.S.C. § 103. Thus, the Applicants believe that all of these claims are now in allowable form.

**I. REJECTION OF CLAIMS 1-5, 7-14 AND 16-18 UNDER 35 U.S.C. § 103****A. Claims 1-5, 7, 9-14, 16 and 18**

The Examiner has rejected claims 1-5, 7, 9-14, 16 and 18 in the Office Action under 35 U.S.C. § 103 as being unpatentable over Lemley, et al. (U.S. Patent Publication 2002/0064152, published on May 30, 2002, hereinafter referred to as "Lemley") in view of Blum et al. (U.S. Patent Publication 2003/0048772, Published on March 13, 2003, hereinafter referred to as "Blum"). Applicants respectfully traverse the rejection.

Lemley teaches a packet voice gateway (PVG) that is adapted on the line side of the communication network. The PVG is designed to provide functionality that can effectively bridge service between a circuited switched based access network and a packet based public network. (See Lemley, Abstract, Paragraphs 0015, 0017 and 0018)

Blum teaches a communication system architecture in which a hybrid fiber coax (HFC) network utilizing an Internet protocol (IP) through an IP network is connectable to a local digital switch (LDS) within a public switched telephone network (PSTN). An IP digital terminal (IPDT) is provided as the link between the LDS and the IP network, where the IPDT serves to translate both signaling and voice data between the two networks. (See Blum, Abstract, FIG. 2 and Paragraph 0022)

The Examiner's attention is directed to the fact that Lemley and Blum fail to teach or suggest a method where a Hybrid-Fiber Coax network translates, within the first network, a VoIP call into a Time-Division Multiplexed (TDM) call compatible with a second network having a capability of processing TDM calls and providing at least one feature for the TDM call, as positively claimed by the Applicants. Specifically, Applicants' Independent claims 1 and 10 positively recite:

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1. A method for providing full-featured Voice-over Internet Protocol (VoIP) telephony service, comprising the steps of:

receiving in a first network a packet-based VoIP call, wherein the first network is a Hybrid-Fiber Coax network;

translating, within the first network, the VoIP call into a Time-Division Multiplexed (TDM) call compatible with a second network having a capability of processing TDM calls and providing at least one feature for the TDM call, the translating comprising sub-steps of (1) performing required signal processing protocols in the first network to allow the VoIP call to interact with the first network as if the first network was performing switch-based processing functions and (2) mapping IP signaling information developed in the first network into a format suitable for processing by the second network;

routing the TDM call to the second network;

processing the TDM call in the second; and

routing the TDM call to its intended destination. (Emphasis added)

10. A method for providing full-featured Voice-over Internet Protocol (VoIP) telephony service, comprising the steps of:

receiving in a first network a packet-based VoIP call and non-voice data packet, wherein the first network is a Hybrid-Fiber Coax network;

separating the non-voice packets from the VoIP call;

routing the non-voice packets to a data network;

translating, within the first network, the VoIP call into a Time-Division Multiplexed (TDM) call compatible with a second network having a capability of processing TDM calls and providing at least one feature for the TDM call, the translating comprising sub-steps of (1) performing required signal processing protocols in the first network to allow the VoIP call to interact with the first network as if the first network was performing switch-based processing functions and (2) mapping IP signaling information developed in the first network into a format suitable for processing by the second network;

routing the TDM call to the second network;

processing the TDM call in the second network; and

routing the TDM call to its intended destination. (Emphasis added)

Applicants' invention teaches a method where a cable television service provider may provide fully-featured VoIP telephony service without having to perform the requisite call processing in the cable television service provider's Hybrid-Fiber Coax (HFC) network. To achieve this goal, Applicants' invention teaches the use of an Internet Protocol Digital Terminal (IPDT) within the HFC network for translating a VoIP call into a TDM format and performs the signaling protocol support functions and the required mapping to allow routing of the call to the PSTN for processing. In other

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words, Applicants' Internet Protocol Digital Terminal (IPDT) performs the translation within the Hybrid-Fiber Coax (HFC) network and communicates directly with the PSTN. (See e.g., Applicants' specification, Paragraphs 0026 and 0027 and FIG. 1.)

In contrast, the alleged combination (as taught by Lemley) discloses a packet voice gateway (PVG) that is deployed on the line side of the communication network. Specifically, Lemley states that:

Disclosed is a novel Packet Voice Gateway (PVG) that is adapted for the line side of the communication network, such as for example in a Digital Loop Carrier Terminal, which provides functionality that can effectively bridge service between a circuit switched based access network and a packet based public network. The ability to so bridge service using the PVG of the present invention allows service operators to extend their circuit switched capital investment by enabling such equipment to be used in connection with a packet based public network. (Emphasis added, See Lemley, Paragraph 0015)

Clearly, the PVG of Lemley is affirmatively deployed on the line side of the communication network. As such, Lemley completely fails to teach or suggest that translation is performed within the HFC network, as positively claimed by the Applicants.

Similarly, the alleged combination (as taught by Blum) employs an Internet Protocol Digital Terminal 200 within an IP network 120, where the IP network is disposed between the HFC network 140 and the local digital switch 210 of the PSTN 100. Blum states that:

The IPDT 200 connects the IP network 120 to a Local Digital Switch (LDS) 210 of the PSTN (not shown here).... The IPDT 200 is capable of translating both call signaling packets and voice packets on the IP network 120 to their appropriate counterparts on the LDS 210. (See Blum, Paragraph 0022)

As such, both Lemley and Blum clearly fail to teach or make obvious Applicants' invention as positively claimed in Applicants' independent claims 1 and 10, where the translation is performed within the HFC network and not in the IP network or in the line communication network. In fact, both Lemley and Blum teach away from Applicants' invention because Blum teaches the use of an intermediate IP network between the HFC network and the PSTN and Lemley teaches that the PVG is deployed in the line communication network.

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Although the Examiner conceded that Lemley's PVG clearly is deployed in the line communication network, the Examiner nevertheless alleged that "it is within the capability of one of ordinary skill in the art to place the PVG or equivalent translator in the HFC network." Applicants respectfully submit that the Examiner is using impermissible hindsight. First, Lemley specifically teaches away from the Examiner's assertion because the PVG is intended to be deployed in the circuit switched based network. Second, there is absolutely no teaching in Lemley or Blum for the modification that the Examiner is currently alleging. Applicants respectfully request that the Examiner provides specific support in Lemley or Blum for this teaching or suggestion.

The Examiner also alleges that where the translating is performed is not deemed to be critical. In supporting this allegation, the Examiner cites *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). Under the *In re Japikse*, the court held that merely shifting the position of a device is unpatentable since it would not have modified the operation of the device. In *Japikse*, a switch was moved to a different position within the same platform (i.e. a hydraulic press). (See *Id.*).

In contrast, the present case requires moving the PVG or equivalent translator from one location in one type of platform (i.e. a circuit switched communication platform) to a second location in a second type of platform (i.e. a HFC communication platform). The Examiner seems to inherently argue that plugging the PVG or equivalent translator from one communication platform to a different communication platform would simply be a "plug and play" operation. The Applicants respectfully submit that due to the intricacies and complexities of HFC networks and circuit switched networks that moving the PVG or equivalent translator from a circuit switched network to a HFC network would require modifications to the PVG or equivalent translator to operate properly within the different communication network environments.

The Applicants note that the alleged PVG or equivalent translator, as interpreted by the Examiner, would have to be capable of performing the translating function in both the HFC network and the circuit switched network. However, the PVG or equivalent translator would operate differently within the different communication network environments. In other words, the PVG or equivalent translator is not a simple "plug and play" device that operates identically in any type of communication network

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environment. Notably, the scope of the Applicants' claims do not cover the architecture where the PVG is located in the line side (i.e. the circuit switched network), as taught by Lemley. Rather, the scope of the Applicants' claims cover the embodiment where a Hybrid-Fiber Coax network translates, within the first network, a VoIP call into a Time-Division Multiplexed (TDM) call compatible with a second network having a capability of processing TDM calls and providing at least one feature for the TDM call.

Consequently, unlike *Japikse* where the moving of a starting switch did not modify the operation of the device, moving the PVG or equivalent translator would require the PVG to be compatible with the protocols and physical connections of two different types of networks. Therefore in the present case, moving the PVG or equivalent translator would modify the operation of the device.

In addition, the fact that the translation is performed within the HFC network allows the operator of the HFC network to be able to provide a new service that it otherwise could not provide. Providing this translation feature allows the operator of the HFC network to maintain competitiveness. Thus, from the perspective of the operator of the HFC network, this translation feature is not trivial.

Moreover, in the same section of the MPEP §2144.04(VI)(C), the precedent of *Ex parte Chicago Rawhide Mfg. Co.* was also cited. In *Ex parte Chicago Rawhide Mfg. Co.*, the court has held that "[t]he mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device." *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984)(emphasis added). As repeatedly stated above, Lemley and Blum fail to even suggest that the PVG or equivalent translator could be moved to within the HFC network. In fact, Lemley and Blum in fact teach away from the Applicants' invention by explicitly teaching that the PVG or equivalent translator should be placed on the line side of the communication network or within an IP network. The Applicants note that the Examiner failed to address the above argument and case law in the Examiner's response in the present rejection.

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Consequently, the Applicants presume that the Examiner concedes to the Applicants' point with respect to the above stated case law.

Furthermore, the Examiner alleged that "there are no claimed features of the translation that technologically compels the process to be taking place in the first network." The Examiner's attention is directed to the fact that Applicants' specification teaches that by having the IPDT to perform translation to allow the PSTN to perform call processing avoids the need to provide the necessary call-processing infrastructure within the HFC network itself. (See e.g., Applicants' specification, para. [0026]). As a result, the Applicants' invention provides flexibility and cost savings. As such, Applicants submit that independent claims 1 and 10 are not made obvious in view of Lemley and Blum.

Dependent claims 2-5, 7, 9, 11-14, 16 and 18 depend from claims 1 and 10, and recite additional limitation, respectively. As such, and for the exact same reason set forth above, the Applicants submit that claims 2-5, 7, 9, 11-14, 16 and 18 are also not made obvious by the teachings of Lemley and Blum. Therefore, the Applicants submit that claims 1-5, 7, 9-14, 16 and 18, as they now stand, fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

B. Claims 8 and 17

The Examiner has rejected claims 8 and 17 in the Office Action under 35 U.S.C. § 103 as being unpatentable over Lemley in view of Blum and in further view of Admitted Prior Art. Applicants respectfully traverse the rejection.

As discussed above, both Lemley and Blum clearly fail to teach or make obvious Applicants' invention as positively claimed in Applicants' independent claims 1 and 10, where the translation is performed within the HFC network and not in the IP network or in the line communication network. In fact, both Lemley and Blum teach away from Applicants' invention because Blum teaches the use of an intermediate IP network between the HFC network and the PSTN and Lemley teaches that the PVG is deployed in the line communication network. As such, Applicants submit that independent claims 1 and 10 are not made obvious in view of Lemley, Blum and the alleged Admitted Prior Art.

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Dependent claims 8 and 17 depend from claims 1 and 10, and recite additional limitation, respectively. As such, and for the exact same reason set forth above, the Applicants submit that claims 8 and 17 are also not made obvious by the teachings of Lemley, Blum and the alleged Admitted Prior Art. Therefore, the Applicants submit that claims 8 and 17, as they now stand, fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

### **CONCLUSION**

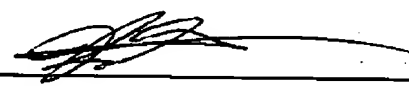
Thus, the Applicants submit that all of these claims now fully satisfy the requirements of 35 U.S.C. § 103. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly requested.

If, however, the Examiner believes that there are any unresolved issues requiring the issuance of a final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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